Castilleja

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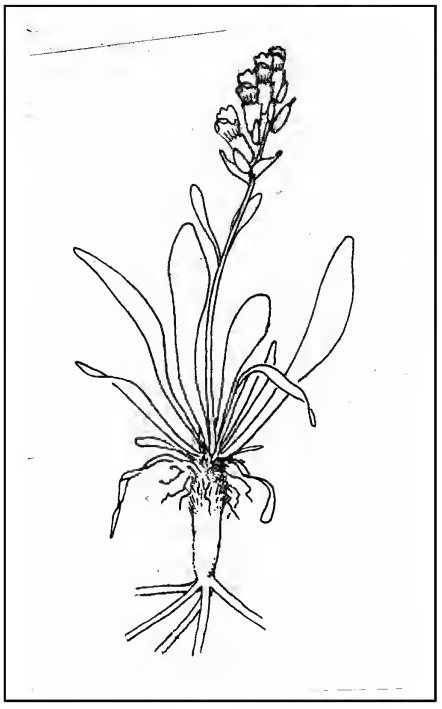
Alive and Well

Floras contain cumulative roll calls, and hidden in the ranks of current floras are plant species that have not been documented in recent decades. The missing species may be either extant or extirpated, with inconclusive information at hand, and they are regarded as "historical" species pending concerted surveys or other forms of investigation. A state rank of "historical" flags the need for botanical work.

Among the species recognized in the Wyoming flora (Dorn 2001 or Nelson and Hartman 1994), up to 41 are historical. They are the species that defy ranking in the state species of concern lists (Keinath et al 2003; see article on list updates – p. 4). In general, they have not been documented since 1970 when systematic surveys and precise location information came into common practice in the state. Some were last collected by Aven Nelson, or much earlier by Thomas Nuttall.



Chinophila jamesii Benth
The genus name is from the Greek *chion*, snow, and *philos*, beloved. The species name is in honor of Edwin James, the botanist who discovered it, who was also the first botanist to explore the flora of the Rocky Mountains above timberline. It is at the northern end of its distribution in the Snowy Range, and remains on the Wyoming species of concern list (see article on rare plant lists, p. 4) ...Look for more about Edwin James in the next issue!
By B. Heidel

The cut-off date and definition of "historical" varies by species mainly with patterns of botanical inventory. The complete list is presented in this issue.

Three species recently re-joined the ranks of the alive-and-well (cont. p. 7)

WNPS NEWS –

TIME FOR *RENEWAL*

Ring in the New Year! Wyoming Native Plant Society membership renewals, elections, and fieldtrip surveys are launched with the arrival of 2004. The bright yellow slip that is enclosed with this issue is your invitation and reminder for all three.

WNPS members are hardest to reach in the summer when renewals have been due in the past. So a winter renewal is more effective and puts us in line with By-laws that set the fiscal year as January 1 – December 31. Membership dues for 2004 come due on January 1, with a grace period up until the time of the annual summer meeting so members who joined or renewed in the latter half of the year are not short-changed. Check the mailing label on this newsletter for membership expiration year (bold-faced in the upper right-hand corner). There are many people who *already* paid 2004 dues!

...Where in Wyoming would YOU like to explore? On the back of the enclosed ballot is a member survey on field trip destinations and a highlight of past WNPS fieldtrip destinations.

We don't have biographic sketches or campaign pledges from our candidates for the Board, just a slate of great folks. Please cast your vote by January 25, mailed to the *new* WNPS mailing address (below).

New WNPS Mailing Address!!

The NEW address of Wyoming Native Plant Society is:

P.O. Box 2500
Laramie, WY 82073

a change that was made with the closing of the UW campus post office.

Please use it with your renewal and all future correspondence!

Reminder: WNPS Scholarship applications are due January 25

Eritrichium howardii – A forget-me-not is our pledge that there are NO forgotten corners of Wyoming !

January Meeting of Teton Chapter: Join Bob Whitecotton for a wildflower slide show at 7:00 pm, held at the Bridger-Teton National Forest Log Cabin on North Cache, on Tuesday, January 13, 2004.

New Member: Please welcome the following new WNPS members/subscribers: Carol DeLapp (Pacific, WA), Tessa Dutcher (Laramie), Deborah Paulson & Bill Baker (Laramie), Western Wyoming Community College (Rock Springs).

Wyoming Native Plant Society
PO Box 2500, Laramie, WY 82073

President: Jennifer Whipple (Mammoth) - 344-7988
Vice President: Jean Daly (Sheridan) - 674-9728
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Teton Chapter: PO Box 82, Wilson, WY 83014 (Joan Lucas, Treasurer)
Bighorn Native Plant Society: PO Box 21, Big Horn, WY 82833 (Jean Daly, Treasurer)

Treasurer's Report: Treasurer's Report: Balance as of 21 November 2003: General Fund $705.40; Student Scholarship Fund $608.50; Total funds $1313.90.

The next deadline for newsletter submissions is February 15. Announcements, articles, and spare humor are *always* welcome.

Beware of Shady Characters

Have you ever wanted warning signs in navigating through *Salix* (willow) taxonomic keys? Robert Dorn published one earlier this year about the plasticity of leaf glaucescence (Dorn 2003), adding significantly to the literature on the morphological plasticity in the genus. Lack of glaucescence in normally glaucous-leaved taxa needs to be used cautiously as basis for taxonomic determinations and realignments. One must also consider phenology and light conditions.

Eight species or varieties of *Salix* in Wyoming that normally have glaucous leaves were grown from cuttings by Dorn under sunny and shaded conditions. None of the youngest leaves showed glaucescence right after emergence, regardless of sunny or shaded conditions. Sun-exposed plants required 11-33 days after budbreak to develop glaucescence, and shaded plants required 18-69 days to develop glaucescence, although glaucesence never reached the intensity of the sun-exposed plants. Three species did not show any glaucescence after 90 days when grown in the shade (*Salix amygdaloides, S. fragilis*, and *S. planifolia*).

Essentially, leaf glaucescence is still a useful genetic characteristic for identifying species of *Salix*. But there is strong environmental influence on its expression that can be the source for misinterpretations, particularly in the *Salix lucida-S. lasiandra* complex and between *S. eriocephala var. mackenzieana*-var. *monochroma*.

The most complete keys to the *Salix* genus for Wyoming are by Dorn (1997, 2001), in addition to an illustrated guide to willows in Shoshone National Forest (Fertig and Markow 2001) with its diversity of willows. BH

Literature Cited

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Fertig, W. and S. Markow. 2001. Guide to the willows of Shoshone National Forest. USDA Forest Service General Technical Report RMRS-GTR-83. Rocky Mountain Research Station. 79 pp. (Printed copies are not currently available but copies can be loaned for copying. Contact: Richard Schneider, Publications, USDA Forest Service, Rocky Mountain Research Station, 240 W. Prospect Road, Ft. Collins, CO 80526-2098; (970)498-1392; or rschneider@fs.fed.us

Photo Contest Announcement:

The nonvasculars have it! We pleased to announce the winner of the 2003 photo contest, William Brenneman (Jelm) with his submittal of a striking alpine lichen, *Rhizocarpon geographicum* (yellow map lichen) engaged in thalluls-to-thallus combat with *Lecidea atrorobrunnea* on Snowy Range tundra. Mr. Brenneman is awarded the $25 prize and one year's free WNPS membership. The vascular showing was out-competed by the nonvascular showing. Thanks to all who participated!

New Rare Plant Species Lists

Two federal sensitive plant species lists and the state species of concern list were updated in the past month. The new 2003 sensitive species list of the U.S. Forest Service – Rocky Mountain Region (Region 2) is now posted: www.fs.fed.us/r2/projects/scp/evals/sensitivelist.shtml, and with it the supplement to the Forest Service Manual 2600-2003-1: www.fs.fed.us/im/directives/field/r2/fsm/2600/2670.doc.The 87 sensitive plant species in the five-state Rocky Mountain Region include 49 in Wyoming. The article by Beth Burkhart earlier this year [March issue of *Castilleja* 22(1)] explains the list revision process. Species assessments for select species are now posted at: www.fs.fed.us/r2/projects/scp/assessments/index.shtml

The Fall 2003 sensitive species list of the Bureau of Land Management in Wyoming is now posted on the new Wyoming BLM Botany homepage at: www.wy.blm.gov/botany/. Thirty-six plant species are recognized as sensitive.

The Fall 2003 Wyoming Plant and Animal Species of Concern list is now posted at: www.uwyo.edu/wyndd/. It presents state and global ranks, county distribution, public land distribution, and cross-reference to all Threatened, Endangered and sensitive federal status (including BLM, FS Region 2 and Region 4). It also presents a new "Wyoming Contribution" rank that reflects the relative contribution of Wyoming populations of a species to the rangewide persistence of that species. There are 473 species recognized as state plant species of concern.

The stories of change are not ordinarily reported. Only last year, Slender mountain-ricegrass (*Oryzopsis pungens*) was considered to be a state species of concern known only from historical records. The data garnered by Black Hills National Forest botany teams documented its secure status in the Black Hills of Wyoming, and it among the taxa deleted from the previous list. What was once only known from a historic record is truly alive-and-well. Lists evolve, in keeping with our understanding..

Copies of the 1994 Wyoming Rare Plant guide publication are still available from the Wyoming Bureau of Land Management (jeff_carroll@blm.gov) or Wyoming Natural Diversity Database (bheidel@uwyo.edu). It covers app. 20% of the current Wyoming plant species of concern and over 50% of the species currently recognized as sensitive by federal agencies. It is useful in combination with the 2003 species of concern list for current distribution information. Expanded field guide and current status summary information is also posted for almost all federal sensitive species and many state species at the WYNDD homepage: www.uwyo.edu/wyndd.

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Celebrating Wildflowers is a collaborative commemoration between the Forest Service, Bureau of Land Management, Fish and Wildlife Service, and the National Park Service. It emphasizes the importance of conservation and management of native plants and plant habitats and highlights the aesthetic, recreational, biological, medicinal, and economic values of wildflowers. This year (2004) will be the first year Wyoming will be participating. The Draper Museum of Natural History, Cody, will host a Celebrating Wildflowers event in early June in collaboration with Wyoming Native Plant Society, Shoshone NF, and The Nature Conservancy – watch for more information in future issues of *Castilleja*. In addition, the Wyoming BLM is proposing a speakers bureau on various topics, ranging from Rare Plants to Xeriscaping, to present at various locations throughout spring and summer. BLM needs experts in different areas of the state to speak about wildflowers and/or lead walks for the public. For more information about Celebrating Wildflowers, visit the website at http://www.nps.gov/plants/cw/.

Seeds of Success is a conservation and native plant materials development program jointly sponsored by the Bureau of Land Management, the Royal Botanic Gardens, (RBG) Kew and the Plant Conservation Alliance. Additional partners are sought for the project as it expands from its first year with BLM collecting seeds on public lands to a national project with a goal of making collections from over 4000 native species by 2010. BLM Wyoming will begin collections in the summer of 2004. BLM is looking to form seed collection teams in various areas around the state. The BLM Washington Office will hold a training session early in the summer for those interested in joining a seed collection team. For more information about Seeds of Success, visit the website at http://www.nps.gov/plants/sos/. For more information about speaking for Celebrating Wildflowers or joining a seed collection team, please contact Corey O'Brien at CoreyOB@hotmail.com or Jeff Carroll at Jeff_Carroll@blm.gov. Or you can visit the BLM WY website at http://www.wy.blm.gov/botany.

Wyoming Native Plant Society
2004 Ballot, Membership Renewal, and Field Trip Survey

2004 Ballot - Please vote for one person for each office:

President _____ Jean Daly (Big Horn)
_____ Joan Lucas (Wilson)

Secretary/Treasurer _____ Drew Arnold (Laramie)
_____ _____

Vice President _____ Melanie Arnett (Laramie)
(Spearfish)
_____ Heidi Anderson (Mammoth)

Board (2-year term) _____ Katherine Zacharkevics
_____ _____

Membership Renewal

Name: _____

Address: _____

_____

_____ $ 7.50 Regular Membership

_____ $15.00 Scholarship-supporting Membership - $7.50 goes to annual scholarship fund)

Starting in 2004, annual membership will coincide with the calendar year.
If you joined or renewed in the past six month, your membership remains current.

Return ballot and survey to: Wyoming Native Plant Society, PO Box 2500, Laramie, WY 82073

Field Trip Survey

Where in Wyoming would you like to explore? Annual field trips of Wyoming Native Plant Society span the far flung corners of the state's flora and landscapes. Half of the counties in the state have NOT been visited. Please vote TWICE – one vote for a destination, and another for a county (differing from the destination).

PLACE VOTE (one vote)

Black Hills/whirlwind tour of disjuncts _____
Cedar Mountain and Uinta Range/Uintah greenthread____
Laramie Peak/ Laramie columbine
_____
Seminole Mountain/Blowout penstemon _____
Other _____

COUNTY VOTE (one vote; geo area differing from place)

Bighorn ____ Campbell ____
Converse ____ Hot Springs ____
Laramie ____ Lincoln ____
Natrona ____ Niobrara ____
Platte ____ Sheridan ____
Sublette ____ Uinta ____
Weston ____
Other county of previous trips _____

How does WNPS increase input and improve planning?
Comments welcome!_____
_____
_____

PAST WNPS ANNUAL FIELDTRIPS

Date	Location	County
27-Jun-81	Castle Gardens	Fremont
24-Jul-82	Black Hills	Crook
2-Jul-83	South Pass	Fremont
11-Aug-84	Beartooth Plateau	Park
3-Aug-85	Yellowstone National Park	Park
4-Jul-86	Flaming Gorge	Sweetwater
18-Jul-87	Laramie Range	Albany
16-Jul-88	Sierra Madre	Carbon
24-Jun-89	Swamp Lake	Park
21-Jul-90	Bighorn Range	Big Horn, Sheridan
22-Jun-91	Bighorn Canyon	Bighorn
27-Jun-92	Beaver Rim/South Pass	Fremont
19-Jun-93	Black Hills, Devils Tower	Crook
9-Jul-94	Grand Teton National Park	Teton
17-Jun-95	Red Desert	Sweetwater
3-Aug-96	Snowy Range	Albany
26-Jul-97	Ft Laramie/Torrington dunes	Goshen
1-Aug-98	Wind River Range	Sublette
19-Jun-99	Flaming Gorge	Sweetwater
17-Jun-00	Shirley Basin	Carbon
6/23/2001	Bighorn Range	Johnson, Washakie
6/14/2002	Heart Mountain, Bald Ridge	Park
5/31/2003	Jack Morrow Hills	Sweetwater

Gardening with Natives

New USDA Plant Materials Index

The USDA PLANTS Database has a new index of information on growing native plant species, an easy-to-use "plant tool" found at: http://plants.usda.gov). This offers a searchable database of published information on propagation of native species. The publications can be downloaded and viewed on-line. It does not replace the well-informed local expert but is vast information resource.

Going NATIVE in the Garden – two new books

Native Plants for High-Elevation Western Gardens
By Janice Busco and Nancy Morin. 2003.
352 pp, color photos. Paperback $29.95.

This paperback book provides information about creating native gardens, and about 150 native species. The selected plants have a southern emphasis but most are suitable for Zones 1-5 (Wyoming is in zones 2 and 3).

From: Fulcrum Publishing, 16100 Table Mountain Parkway, Suite 300, Golden, CO 80403.
http://www.fulcrum-books.com/

Native Plants for Intermountain Landscapes,
Wendy Mee, Jared Barnes, Roger Kjelgren, Richard Sutton, Teresa Cerny and Craig Johnson. 2003.
220 pp., color photos. Hardbound $59.95.

This full-color hardbound book covers more than 200 native species of the Intermountain Region, with information on their natural habitat, appearance, and suitability in terms of hardiness, drought tolerance, establishment, maintenance needs, best use in the garden, and wildlife values.

From: Utah Botanical Center, Utah State University Press, Logan, UT 84322-7800.
www.uwu.edu/usupress/individl./water%20wise.htm

Ask Linnaeus! Questions about his life.
By Carl Linneaus

Dear Linnaeus,
I've read that you originally thought of your binomial system of nomenclature as *nomina trivialis*, trivial names. Were you anticipating a popular board game?
Theorizing in Thermopolis

Dear Theo,
I had no idea that trivia would be such a hit. It was just my way of communicating about species with my students and correspondents in a sort of "nickname" form, rather than writing out the entire description each time. I even got tired of writing out my own full name all the time and just became "L." L.

Dear Linnaeus,
What is your favorite song?
Lyrical in Laramie.

Dear Lyrical,
I have a special fondness for the old Swedish folksong "Värt har alla blommorna försvunnet?" made popular in your country by Pete Seeger as "Where have all the flowers gone?" L.

Dear Linnaeus,
Did you ever visit Wyoming?
Forgetful in Fort Washakie

Dear Forgetful,
No, but I did visit Lapland. It is very similar to Wyoming – cold, wild, with scattered populations of people in funny hats. L.

Dear Linnaeus,
Is it true that you wanted to acclimatize coconuts to the rigors of the Swedish winter? Didn't you recognize the idea as somewhat outlandish?
Worried in Worland

Dear Worried,
I had heard that coconuts migrated to Mercia by way of swallows. As far as collections from the tropics went, I was far better at taking care of those that were already dead. L.

Dear Linnaeus,
Why is Uppsala spelled with two "p"s? Isn't that repetitive and redundant?
Baffled in Buffalo

Dear Baffled,
If it only had one "p" you English speakers would pronounce it as "Up-sala" when it is supposed to be pronounced "Oop-sala." Of course, we couldn't spell it as "Oopsala," that would be silly. L.

Alive and Well (cont. from p. 1)

Slender mountain-ricegrass (*Piptantherum pungens*; syn. *Oryzopsis pungens*) was first collected in Wyoming in 1950 by A.A. Beetle from the Black Hills (Crook County). It "disappeared" for all practical purposes for the rest of the century. But in 2002, concerted sensitive plant surveys were conducted in the Bear Lodge District of the Black Hills National Forest by organized teams of botanists working throughout the growing season. They found 67 new locales for slender mountain rice-grass among their many new records, from late-summer surveys in stands of paper birch, Ponderosa pine and bur oak.

It is among our few disjunct grass species with a distribution pattern all its own. It extends from Labrador to British Columbia, drops south of the 49th parallel in the eastern part of the U.S., and is disjunct in the West in the Black Hills, where it is more common in South Dakota portion of the Black Hills (Larson and Johnson 1999). It is also in the Arkansas Divide of eastern Colorado (Weber and Wittmann 2001).

At the opposite end of the state, Western bladderpod (*Lesquerella multiceps*) was re-collected in 2003 as part of a BLM status survey targeting this species. It was first collected in Wyoming by Edwin Payson and George Armstrong above Alpine in 1923 (northern Lincoln County), and last documented in a collection on the Bear River Divide of southern Lincoln County in 1964. I re-collected it on the Bear River Divide. *Lesquerella multiceps* is a regional endemic known from southeastern Idaho, northeastern Utah, and Lincoln County, WY.

The third recent rediscovery, Ribbon-leaf pondweed (*Potamogeton epihydrous*), was fished out of a fen in the Sierra Madres (Carbon County) as part of a Medicine Bow National Forest peatland study I conducted. The Sierra Madres are "next-door", in the Wyoming sense, to the Elk Mountain area where C.L. and Marjorie Porter collected it over 40 years ago.

One of the most dramatic rediscoveries involved the "long-lost *Parthenium*" by R.C. Barney and H.D. Ripley in 1947, over 113 years after it was first collected by Thomas Nuttall (See March 2003 issue of *Castilleja*, and Locklear 1989, 1990). Unlike *Parthenium alpinum* and *Lesquerella multiceps*, most of the historical species in Wyoming are peripherals at the margins of their range, rather than at the center of their range or rare rangewide.

Not all historical species are regarded as species of concern. Some are thought to represent accidental introductions, short-lived escapes, or other special cases. The most challenging cases involve taxonomic status questions. Most have been addressed in prodigious research on the state flora. For example, *Arabis fruticosa* Nelson was collected once by Aven Nelson and Elias Nelson in Yellowstone National Park in 1899. Studies by Robert Dorn of the type specimen and other *Arabis* collections he made in the vicinity lead him to consider this species to be merely a robust variant of *A. microphylla*, which is known from the same location (discussed in Dorn 1988). Thus, it was not retained in the current state flora.

Not all "missing" species are regarded as historical species. Mystery wormwood (*Artemisia biennis* var. *diffusa*) has not been seen in Wyoming since it was first discovered and documented at the type locality in 1980 by Robert Dorn (see Fertig 2000). It has not been relocated in deliberate searches made to the type locale during eight subsequent surveys. But its habitat remains. It is a biennial that is likely to have a seed bank, and some of the most intensive and extensive surveys for it were in drought years, so it is not considered a historical species – at least not yet.

Other historical species simply represent species of remote, dangerous, inaccessible, privately-owned, or in some other form of rarely-botanized habitat. In Montana, Small-headed clover (*Trifolium microcephalum*) had only been collected once in the Bitterroot Valley by none other than Meriwether Lewis. Over 180 years later, Wallace Albert, an avid botanist/fisherman with a gait impeded by polio re-discovered it on the heels of the Corps of Discovery (in Lackschewitz 1991).

The status of historical species is riddled with questions and in some cases the very location cannot be resolved without concerted work, whether in the field, the herbarium, or historical archives. For example, the type collection of Larimer aletes (*Aletes humilis)* by George Osterhout was in northern Colorado (e.g., cited in Coulter and Nelson 1909), and a collection from the same general area in 1902 by Leslie Goodding was interpreted to be in southern Wyoming by Dorn in the course of his work with historical archives, even though the evidence is not conclusive.

Re-discoveries of historical species might be mistaken for new discoveries. The most amazing such case in Wyoming is the discovery of Blowout

penstemon (*Penstemon haydenii*) by Frank Blomquist, BLM, in 1996 (Fertig 1999), thought to represent a rediscovery in the vicinity of the original collection by the Hayden expedition in "Wyoming Territory" in 1877, 119 years earlier (Fertig 2001).

Historical collections may be misinterpreted or merely overlooked for want of complete floras. The Contracted Indian ricegrass (*Oryzopsis contracta)* that I collected in Montana was thought to be an addition to the state flora until a check in the Rocky Mountain Herbarium by Walter Fertig turned up a 1928 collection from the same county of Montana. Similarly, Hollis Marriott collected Bighead pygmy cudweed (*Filago prolifera*) in Montana and her later review of specimens in the Rocky Mountain Herbarium turned up a historical collection from Montana that had not been included for the state in any floras to date. Wyoming has the benefit of ongoing, concerted floristic documentation and a relatively complete list of historical species tied to it, but this does not entirely rule out the possibility of specimens collected in Wyoming that have escaped scrutiny in repositories elsewhere.

Relocating a historical species is more than a botanical treasure hunt. It is a leveling experience that puts our brief existence in proper perspective following paths of earlier botanists (Snyder 1993). It also marks new botanical opportunities to understand the local floras, habitats and relations

Yes, it's true – mistletoe is *Historical* in Wyoming!

However, *Arceuthobium douglasii* (Douglas-fir dwarf mistletoe) is NOT hung from ceilings at holidays. That mistletoe is *Viscum album*, a European species also in the Loranthaceae. The Druids considered the mistletoe to be a sacred plant and believed it had miraculous properties which could cure illnesses, serve as an antidote against poisons, ensure fertility and protect against the ill effects of witchcraft. Moreover, whenever enemies met under the mistletoe in the forest, they had to lay down their arms and observe a truce until the next day. From this has seemingly come the ancient custom of hanging a ball of mistletoe from the ceiling and exchanging kisses under it as a sign of friendship and goodwill

More mistletoe info is at: http://www.candlegrove.com/mistletoe.html

that are relocated with the historical species, a piece of Wyoming among the alive-and-well. BH

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Historical Species in Wyoming[1]

Scientific Name	Common Name	GRank	County	Most *Recent* Record
Aletes humilis	Colorado Indian-parsley	G2G3	ALB?	L. Goodding (8850). 1902. RM. Question whether the collection was in Wyoming.
Aquilegia formosa var. formosa	Crimson columbine	G5T5	PAR	Porter, C.L. and R.C. Rollins (5800). 1951. RM.
Arceuthobium douglasii	Douglas-fir dwarf mistletoe	G5	LIN, TET	Peterson, R.S. (62-64). 1962. RM.
Asclepias hallii	Hall's milkweed	G3	ALB	Porter, C.L. (5148). 1949. RM.
Asclepias subverticillata	Horsetail milkweed	G4G5	CAR	Porter, C.L. (4404). 1947. RM.
Astragalus diversifolius	Meadow milkvetch	G3	SUB?	Nuttall, T. 1834. BM. Question whether the collection was in Wyoming.
Bromus pubescens	Hairy wood brome	G5Q	CON	Nelson, E. (501). 1901. RM.
Callirhoe involucrata	Purple poppy-mallow	G5	GOS, JOH	Tweedy (3500). 1900. RM.
Carex proposita	Smoky Mountain sedge	G4	TET	Nelson, A. and E. Nelson (6539) 1899. RM.
Cirsium canovirens	Gray-green thistle	G4G5	PAR	Nelson, A. and E. Nelson (6014). 1899. RM.
Clarkia pulchella	Large-flower clarkia	G4G5	TET?	McCoullogh, F. (s.n.). 1892. RM. Question whether the collection was in Wyoming.
Collomia grandiflora	Large-flower mountain-trumpet	G5	LIN? SWE?	McCosh, A.J. (s.n.). 1878. RM.
Cuscuta megalocarpa	Big-fruited dodder	G5	PLA	Nelson, E. (5053). 1898. RM.
Draba glabella	Rock whitlow-grass	G4G5	PAR	Johnson, P.L. (112). 1959. RM.
Draba spectabilis var. oxyloba	Showy draba	G3?T3Q	CAR	Porter, C.L. (10216). 1966. RM, UC.
Elymus triticoides	Beardless wildrye	G4G5	ALB	Nelson, A. (5292). 1898. RM.
Eriophyllum wallacei	Woolly Easter-bonnets	G5	ALB	Nelson, Elias (4336 A). 1898. RM.
Erigeron pumilus var *gracilior*	Shaggy fleabane	G5TQ	PAR	
Euphorbia exstipulata var. exstipulata	Square-seeded spurge	G5T5?	PLA	Nelson, A. (549). 1894. RM.
Froelichia gracilis	Slender snake-cotton	G5	WES	Degener, O. and L. Peiler (16148). 1942. RM.
Heterocodon rariflorus	Western pearl-flower	G5	TET	Anderson, L. C. (423) 1956 (RM).
Horkelia fusca var. parviflora	Pinewoods honeydew	G5T?	PAR	Goddard (1027). Pre-1938. U-CA.
Huperzia haleakalae [Lycopodium selago]	Fir clubmoss	G4?	TET	Williams, L.O. (1017). 1932. RM.
Hymenopappus tenuifolius	Chalkhill woollywhite	G5	CRO	Griffiths, D. (s.n.). 1897. MO.
Lithospermum multiflorum	Purple gromwell	G4	LAR	Nelson, A. (s.n.). 1896. NY.
Loeflingia squarrosa var. artemisiarum	Spreading pygmyleaf	G5T2T3	SWE	H.D. Ripley and R.C. Barneby. (7938). Pre-1970. CAS, NY.
Melica smithii	Smith's melic-grass	G4	TET	Nelson, A. and E. Nelson. (6524). 1899. RM.
Orobanche ludoviciana var. arenosa	Louisiana broomrape	G5T5	TET	Reed, J. F. (1195) 1947 (RM).
Oxytheca dendroidea	Treeline puncturebract	G4	FRE, HOT, SUB?, SWE	Payson, E. B. and L. Payson (2566). 1922. RM, GH, NY, MO, COLO, F, OSC, PH, POM, UC, US.
Penstemon watsonii	Watson's beardtongue	G5	UIN	Porter, T.C. (s.n.). 1873. NY.
Polemonium micranthum	Annual Jacob's-ladder	G5	PAR	Burglehaus, F.H. (s.n.). 1893. NY.
Polystichum scopulinum	Mountain holly-fern	G5	TET	Doutt, M.T. (155). 1930. RM.
Potamogeton obtusifolius	Blunt-leaf pondweed	G5	TET	Porter, C.L. (9405). 1963. RM.
Potamogeton zosteriformis	Flatstem pondweed	G5	TET	Solheim, W.G. (4067). 1955. RM, GTNP.
Potentilla ambigens	Silky-leaf cinquefoil	G3	ALB	Nelson, A. (7438). 1900. RM.
Potentilla concinna var. bicrenata	Red cinquefoil	G5?T?	ALB	Osterhout, G.E. (s.n.). 1897. RM.
Ranunculus flabellaris	Greater yellow water buttercup	G5	UIN	Rollins, R.C. (173). 1932. RM.
Spirodela polyrrhiza	Common water-flaxseed	G5	TET	Lahser, C. W. JR. (508). 1963. GTNP.
Sporobolus neglectus	Small dropseed	G5	BIG, PAR	Nicholls, J. M. (s.n.). 1952. RM.
Stephanomeria exigua	White-plume wire-lettuce	G5?	SUB?, SWE?	Nuttall, T. (s.n.) 1834 or 1835. GH. Question whether the collection was in Wyoming.
Townsendia florifera	Showy Townsend-daisy	G5	TET	McCullough, F. (s.n.) 1892 (RM).

[1] Prepared by B. Heidel, referencing RM accession data, and occurrence and state status information compiled by W. Fertig and others at WYNDD

New Edition of Utah Flora

The Third Edition of "A Utah Flora" is now out. Authors are S. L. Welsh, N. D. Atwood, S. Goodrich & L. C. Higgins. It is available from Brigham Young University, 290 MLBM, P. O. Box 20200, Provo, Utah 84602-0200. It is 911 pages and 8 1/2" in size for $85.00 plus shipping costs ($3-5.00). Credit card orders can be placed at 801-378-5052.

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To find out if your membership has expired, check the upper righthand corner of the mailing address label (below). The last two digits indicate the year through which membership is paid. Expired memberships are **bold-faced.**

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P.O. Box 2500
Laramie, WY 82073

The Wyoming Native Plant Society, established in 1981, is a non-profit organization dedicated to encouraging the appreciation and conservation of the native flora and plant communities of Wyoming. The Society promotes education and research on native plants of the state through its newsletter, field trips, and annual student scholarship award. Membership is open to individuals, families, or organizations with an interest in Wyoming's flora. Members receive *Castilleja*, the Society's quarterly newsletter, and may take part in all of the Society's programs and projects, including the annual meeting/field trip held each summer. Dues are $7.50 annually.

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